

Educating Primary Care Providers About HIV Disease: Multidisciplinary Interactive Mechanisms

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Synopsis

As HIV-related prophylactic and therapeutic research findings continue to evolve, the Health Resources and Services Administration (HRSA) of the Public Health Service has created multidisciplinary mechanisms to disseminate new treatment options and educate primary care providers at rural and urban sites throughout our nation's health care system.

HRSA has implemented (a) the International State-of-the-Art HIV Clinical Conference Call Series, (b) the national network of AIDS Education and Training Centers, (c) the nationwide HIV Telephone Consultation Service, and (d) the Clinical Issues Subcommittee of the HRSA AIDS Advisory Committee.

These collaborative and comprehensive efforts at HIV information dissemination target physicians, nurses, physician assistants, dentists, clinical pharmacists, mental health care providers, case managers, and allied health professionals. The sites where they provide care include public health clinics; county, State and Federal correctional facilities; private practice offices; community and academic hospitals; military and Veterans Administration facilities; hemophilia centers; schools of medicine, nursing, and dentistry; departments of health; chronic care facilities; visiting nurse and home care agencies; health maintenance organizations; and Indian Health Service clinics and hospitals.

IN THE UNITED STATES, more than 100,000 persons are living with AIDS, and as many as a million are believed to have HIV infection. The nation's need for HIV knowledgeable and skilled primary care providers continues to grow as the number of infected persons and length of survival increase.

If management of HIV infection and AIDS is limited to tertiary specialty settings, many infected patients will not receive the benefit of new knowledge about this chronic and progressive disease. Primary care providers who feel inadequately prepared in the face of rapid research developments may be reluctant to include people with HIV infection or

AIDS in their clinical practice. In addition, quality care for people with HIV infection and AIDS often requires that the provider address issues not traditionally well covered in the education of health professionals, such as sexuality and addictive disease.

Therefore, the Health Resources and Services Administration (HRSA) of the Public Health Service has implemented specific programs that are dedicated to the education and training of primary care providers in clinical management of HIV infection and AIDS and that facilitate the timely dissemination of new HIV related treatment information as it becomes available. HRSA sponsors the International State-of-the-Art HIV Clinical Conference Call Series, the national network of AIDS Education and Training Centers, the nationwide HIV Telephone Consultation Service, and the Clinical Issues Subcommittee of the HRSA AIDS Advisory Committee (1-3).

International Clinical Conference Calls

The HIV Clinical Conference Call Series is a collaborative venture between HRSA, the National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health, the Centers for Disease Control and Prevention, and expert clinicians and educators from academia. During these live multidisciplinary interactive audio teleconferences, primary care providers and educators have the unique opportunity to sequentially address timely clinical issues with internationally renowned clinical experts. New telephonic bridging technologies, such as electronic polling, allow participating sites to interact with experts in a highly organized and cost-effective manner. Providers can obtain printed transcriptions of the teleconferences, thus maximizing access to the programs' state-of-the-art information.

Established in September 1992, the quarterly HIV clinical conference calls have expanded to involve thousands of participants at hundreds of urban and rural clinical sites throughout the contiguous United States and in Alaska, Hawaii, Puerto Rico, St. Croix, and St. Thomas. Clinical sites range from large medical centers to public health clinics, to individual practitioners' private practice offices. Each state-of-the-art program is accredited for category 1 continuing education for participating physicians, physician assistants, and nurses through collaborative arrangements with Linda Frank, PhD, and Monto Ho, MD, at the University of Pittsburgh Graduate School of Public Health, and Wilma Morgan, RN, at the Indian Health Service Clinical Support Center in Arizona.

Two-phase pre-program needs assessments are performed prior to each session, using facsimiles as

the primary communication modality. During phase 1 of each needs assessment, clinically relevant topics are solicited from the participating primary care providers and educators (for example, the topic "Prophylaxis: Prevention of Opportunistic Infections" was chosen for the February 1994 session).

During phase 2, participants submit specific questions regarding the chosen topic, such as "Is there a role for atovaquone in *Pneumocystis carinii* prophylaxis?" The questions are then collated into a final format, and an agenda is produced; it is distributed by facsimiles to the participants and expert consultants before each clinical conference call. During the conference calls, the collated submitted questions, as well as additional "live-on-the-air" followup questions from listeners, are answered by expert clinicians.

Availability of the programs is promoted directly to HRSA and NIAID grantees, as well as through numerous collaborators—the National Association of Community Health Centers, National Hemophilia Foundation, Department of Veterans Affairs, Department of Defense, and State departments of health. Through the use of speaker phones, sites have as many as 77 participants using a single line, making the program cost effective. As a public service, the expert consultants participate in the conference calls from their offices, thus, there are no travel or honoraria expenses.

The first in this series of state-of-the-art HIV clinical conference calls occurred in September 1992. The topic selected by primary care providers and educators was tuberculosis and multidrug resistant disease. Arthur Pitchenik, MD, a pulmonary subspecialist caring for patients with HIV disease and multidrug resistant tuberculosis in Miami, FL, served as the expert consultant for the interactive 2-hour program.

The second clinical conference call was held in November 1992, and the topic selected was the use of ddI (dideoxyinosine) and ddC (dideoxycytidine). The expert consultants for this 1-hour session were Paul Volberding, MD, and Michael Clement, MD, at San Francisco General Hospital.

The third clinical conference call, held in February 1993, was devoted to therapeutic HIV vaccines. The expert consultants were Lewellys Barker, MD, of NIAID in Bethesda, MD, and David Chernoff, MD, at the Chiron Corporation in Emeryville, CA.

For the fourth clinical conference call, in April 1993, two topics were selected. The idiopathic CD4 lymphocytopenia syndrome was discussed by Scott Holmberg, MD, at the Centers for Disease Control and Prevention in Atlanta, GA. The second topic,

convergent combination therapy with nonnucleoside reverse transcriptase inhibitors, was discussed by H. Clifford Lane, MD, and Dr. Barker, both of NIAID in Bethesda.

The fifth clinical conference call, in July 1993, was devoted to the clinical implications of the Anglo-French Concorde Trial of Zidovudine. The expert consultants were Dr. Volberding and Dr. Barker. As a followup, the sixth clinical conference call, in October 1993, discussed the spectrum of antiretroviral clinical management options. The expert panel of consultants included Gifford Leoung, MD, at San Francisco General Hospital; Renslow Sherer, MD, at Cook County Hospital in Chicago; Bruce Soloway, MD, at Bronx Lebanon Hospital in New York; and Eric Goosby, MD, at HRSA in Rockville, MD.

The seventh clinical conference call, in February 1994, was devoted to the spectrum of primary and secondary prophylactic regimens for the prevention of opportunistic infections. The panel of experts included Frederick Hecht, MD, at San Francisco General Hospital, Dr. Sherer, and, Dr. Goosby.

More than 2,500 primary care providers and educators at 377 sites participated in this session, including listeners at sites overseas. In collaboration with HRSA's Office of International Health and the U.S. Agency for International Development, we expanded the clinical conference call series to participating sites in Belize, Peru, Kuwait, Ghana, and the Republic of China (Taiwan). In collaboration with the U.S. Information Agency's Voice of America, portions of our clinical conference calls have been translated into Creole, Urdu, Thai, Russian, Rumanian, Spanish, and Portuguese; the Voice of America has broadcasted segments of our conference calls worldwide in these seven languages and English.

Among the 377 registered sites, participants in our clinical conference calls include physicians, nurses, physician assistants, dentists, clinical pharmacists, mental health care providers, case managers, and educators. The sites include community and migrant health centers; public health clinics; providers of care to the homeless; substance abuse and sexually transmitted disease clinics; Indian Health Service clinics and hospitals; private practice offices; health maintenance organizations; community and academic hospitals; Veterans Administration Medical Centers; clinics and hospitals of the U.S. Air Force and Army; hemophilia centers; schools of medicine, nursing, and dentistry; departments of health; medical clinics at county, State, and Federal correctional facilities; visiting nurse and home care agencies; chronic care facilities; Area Health Education Centers; reference

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specialists at the AIDS Clinical Trials Information Service; the American Medical Association's Division of HIV in Chicago; AIDS Education and Training Centers; and NIAID-supported Community Programs for Clinical Research on AIDS and AIDS Clinical Trials Units.

Each clinical conference call session is followed by a post-program evaluation. Participants are asked to evaluate the presentations and to comment and suggest future topics. The 1-page forms are faxed back to HRSA. Evaluations have revealed that the topics and expert consultants have been timely, relevant, and informative; conference rooms with speaker phones at clinical sites offer comfortable interactive settings for participating staff providers and educators; clinicians in private practice appreciate the opportunity to participate from their offices without having to travel to academic sites; and participants appreciate receiving the collated list of questions and the glossary of relevant terminology (for example, intention to treat analysis, meta analysis, Kaplan Meier survival curves, hazard ratio) in advance of each session.

To obtain further information and registration forms for the next International State-of-the-Art HIV Clinical Conference Call, send correspondence by FAX to Captain Abe M. Macher, MD, USPHS, at 301-443-1719.

AIDS Education and Training Centers

Through cooperative agreements, a nationwide network of 17 AIDS Education and Training Centers are funded by the Health Professions HIV Education Branch, Division of Medicine, Bureau of Health Professions, HRSA. Since 1987, the AIDS Education and Training Centers have been responsible for designated geographic areas where they conduct targeted multidisciplinary programs for health care professionals. Eleven programs are regional multi-State centers, such as the Northwest AIDS Education and Training Center which serves Alaska, Washington, Oregon, Montana, and Idaho. Six centers are

Program Directors and Areas Served by AIDS Education and Training Centers (ETC)

Washington, Alaska, Montana, Idaho, Oregon

Ann Downer, MS, 206-720-4250
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Nevada, Arizona, Hawaii, California
(excluding 6 southern California counties)
Michael Reyes, MD, 209-252-2851
Western AIDS ETC, University of California at Davis, Fresno

Riverside, San Bernardino, Los Angeles, Orange, Ventura, Santa Barbara Counties, CA

Jerry Gates, PhD, 213-342-1846
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East Central AIDS ETC, Ohio State University, Columbus

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Alabama, Georgia, North Carolina, South Carolina

Ira Schwartz, MD, 404-727-2929
Emory AIDS Training Network, Emory University, Atlanta, GA

Florida

Howard Anapol, MD, 305-585-7836
Florida AIDS ETC, University of Miami

Puerto Rico

Angel Bravo, MPH, 809-759-6528
Puerto Rico AIDS ETC, University of Puerto Rico, Rio Piedras

local or statewide, such as those serving Pennsylvania, New Jersey, Florida, Puerto Rico, the District of Columbia, and the area surrounding Los Angeles (see box).

The AIDS Education and Training Centers provide both didactic and clinical training. Didactic mechanisms include lectures, grand rounds, seminars, symposia, workshops, local and regional teleconferences, and instructional audiotapes, videotapes, and

computer programs. The centers also offer intensive experiential "hands-on" clinical mini-residencies for allopathic and osteopathic physicians, nurses, nurse practitioners, physician assistants, dentists, and dental hygienists. The centers serve as resource centers; they offer local and regional clinical consultation warm-lines, provide referrals for clinical care, and supply information about available clinical trials and expanded availability of medications.

HIV Telephone Consultation Service

The nationwide HIV Telephone Consultation Service is co-sponsored by HRSA's Western AIDS Education and Training Center, the American Academy of Family Physicians, HRSA's Bureau of Health Resources Development, and the Office of AIDS Research of the National Institutes of Health.

In March 1993, the regional HIV clinical consultation warmline at San Francisco General Hospital was expanded to serve the entire nation. Health care providers can call a toll-free number (1-800-933-3413) from 10:30 a.m. to 8 p.m. Eastern Time Monday through Friday, and expert consultants will answer their HIV-related clinical management questions (after hours, or if the line is busy, the caller can leave a recorded question, and a consultant will return the call). Dr. Ronald Goldschmidt of the Department of Family and Community Medicine, University of California at San Francisco, directs this multidisciplinary expert consulting team of four physicians, four clinical pharmacists, and two nurse practitioners. The clinical pharmacy consultants, directed by Kirsten Brossier Balano, PharmD, are a critical component of this service, as 47 percent of callers receive consultation from a clinical pharmacist.

Through February 1994, the warmline had received more than 4,100 calls and 4,600 questions. Questions spanned the spectrum of HIV disease including testing and counseling, evaluation of symptoms, developments in therapy, and drug-drug interactions. The consultation service averages 15 to 20 calls per day. Evaluation of caller data through November 1993 demonstrates that 41 percent of callers had used the consulting service more than once. Fifty-four percent of the callers were physicians, 21 percent were nurses, 7 percent were pharmacists, and 5 percent were nurse practitioners. The majority of the physicians, 50 percent, were in family practice, 23 percent in internal medicine, 5 percent in infectious diseases, and 3 percent in general practice. The callers' sites of practice were as follows: 22 percent a community clinic, 18 percent a private practice, 6 percent in home health care, 3 percent a health maintenance organization, and the remainder were from a variety of other clinical sites, including hospital-based inpatient and outpatient services.

Clinical Issues Subcommittee

The Clinical Issues Subcommittee of the HRSA AIDS Advisory Committee was formed in 1993 to

Members of the Multidisciplinary Clinical Issues Subcommittee of the HRSA AIDS Advisory Committee

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San Juan AIDS Institute

Bruce Soloway, MD
Bronx Lebanon Family Practice Center

Jack Whitescarver, PhD
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respond to the needs of primary care providers on the front lines of HIV care who are sometimes uncertain about the clinical implications of fast breaking, widely reported, but often quite specialized research findings. The subcommittee's task is to interpret such studies in the context of direct patient care and to provide guidance to HRSA regarding transmission of this new information to the many clinicians and clinical sites supported by HRSA, as well as to the larger community of clinicians through the nationwide network of AIDS Education and Training Centers.

The subcommittee does not write clinical guidelines, but the members rather work to provide clinicians in the community with support in understanding the practice implications of the results from research studies. For example, several subcommittee members collaborated on a "clinical commentary" that addressed the implications of convergent combination antiretroviral therapy for patients and primary care providers; the commentary appeared in April 1993, at a time when press coverage and activist demands had led to considerable confusion among patients. Copies of the clinical commentary, published in *AIDS Clinical Care*, were mailed to thousands of primary care providers through the nationwide network of AIDS Education and Training Centers (4).

The subcommittee is broadly multidisciplinary as it is composed of nurses, family practitioners, general internists, infectious disease subspecialists, a pediatrician, an obstetrician-gynecologist, a psychiatrist, an epidemiologist, a clinical pharmacist, and a clinical pathologist (see box, page 309). Members were recruited who had substantial experience in both HIV-related research and clinical care. Therefore, members of the clinical issues subcommittee also serve as expert panelists in our International State-of-the-Art HIV Clinical Conference Call Series. Members Gifford Leoung, MD, and Bruce Soloway, MD, served on the October 1993 panel that addressed the spectrum of antiretroviral treatment options.

The interface between basic research and clinical practice is of great importance across health care topics and disciplines; it is hoped that the subcommittee's approach to HIV infection will offer a model for addressing this challenge in a number of other medical arenas.

Conclusion

During an era of rapidly changing HIV-related concepts and research findings, HRSA is generating and promoting multidisciplinary mechanisms to dis-

seminate new treatment options to primary care providers. Four successfully implemented efforts include the International State-of-the-Art HIV Clinical Conference Call Series, the national network of AIDS Education and Training Centers, the nationwide HIV Telephone Consultation Service, and the Clinical Issues Subcommittee.

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